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| 09/592,472 | 06/09/2000 | Herschel Clement Burstyn | SAR 13774 | 7435 |

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EXAMINER

HOFFMAN, BRANDON S

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2136

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/592,472

Applicant(s)

BURSTYN ET AL.

Examiner

Brandon Hoffman

Art Unit

2136

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-20 are pending in this office action.
2. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Rejections

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections – 35 USC § 102

4. Claims 1, 2, 10-13, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Wroblewski (U.S. Patent No. 6,018,374).

Regarding claim 1, Wroblewski teaches a method for distorting a recording of projected images, the recording having a frame frequency, the method comprising the steps of:

- **Without varying the frame frequency of the projector**, imposing an interference on the projected images at a frequency that renders the interference imperceptible to a human viewer (col. 2, lines 36-61),
 - Wherein a difference between the interference frequency and the recording frame frequency is perceptible to a human (col. 2, lines 62-65).

Art Unit: 2136

Regarding claim 2, Wroblewski teaches wherein the step of imposing an interference includes the step of interrupting a projection of the projected images (col. 2, lines 36-54).

Regarding claims 10 and 18, Wroblewski teaches wherein the interfering element includes a light source operable to project an image (fig. 1, ref. num 14).

Regarding claim 11, Wroblewski teaches a method for operating a motion picture projector **having a projector frame frequency**, comprising the steps of:

- **Without varying the projector frame frequency**, determining a recording device frame frequency (the recording device frame frequency is set at 30 fps as is standard with camcorders and other recording devices)
- Blanking a projected image at a humanly imperceptible blanking frequency (col. 2, lines 36-61),
 - Wherein a difference between the frame frequency and the blanking frequency is a humanly perceptible frame frequency (col. 2, lines 62-65).

Regarding claim 12, Wroblewski teaches a projection system for distorting a recording of projected images, the recording having a frame frequency, the system comprising:

- An interfering element (fig. 1, ref. num 14); and
- A controller coupled to the interfering element (col. 2, lines 45-49),

- o Wherein the controller, **without varying the projected image frame frequency**, causes the interfering element to impose a humanly imperceptible alteration on the projected images (col. 2, lines 36-61) and
- o Wherein a playback of a recording of the projected images displays humanly perceptible alterations (col. 2, lines 62-65).

Regarding claim 13, Wrobleski teaches wherein the interfering element includes one selected from the group comprising a shutter, a filter, a light valve and a lens (the Examiner believes it to be inherent that the projection apparatus contains a shutter).

Claim Rejections - 35 USC § 103

5. Claims 3-5, 7, 8, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wrobleski (USPN '374) in view of Sato (U.S. Patent No. 6,041,158).

Regarding claim 3, Wrobleski teaches all the limitations of claim 1, above. However, Wrobleski does not teach wherein the interference is characterized by a plurality of parameters, comprising the further step of varying at least one of the parameters.

Sato teaches wherein the interference is characterized by a plurality of parameters, comprising the further step of varying at least one of the parameters (col. 6, lines 25-41).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine a plurality of parameters, where at least one parameter is varied, as taught by Sato, with the method of Wrobleski. It would have been obvious for such modifications because this prevents a video signal from being copied (see abstract of Sato).

Regarding claim 4, the combination of Wrobleski in view of Sato teaches wherein the step of varying at least one of the parameters includes the step of dynamically varying at least one of the parameters (see col. 6, lines 25-41 of Sato).

Regarding claim 5, the combination of Wrobleski in view of Sato teaches wherein the at least one of the parameters is selected from the group comprising duty cycle, frequency, amplitude, presentation order and wavelength (see col. 6, lines 25-41 of Sato).

Regarding claim 7, Wrobleski teaches all the limitations of claim 1, above. However, Wrobleski does not teach separating the projected images into a plurality of colors, wherein the imposing step includes the further step of modulating at least one of the plurality of colors.

Sato teaches separating the projected images into a plurality of colors (col. 6, lines 5-8), wherein the imposing step includes the further step of modulating at least one of the plurality of colors (fig. 4, ref. num 4).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine separating the image into a plurality of colors and modulating at least one color, as taught by Sato, with the method of Wrobleski. It would have been obvious for such modifications because the modulated color prevents copying of the video signal (see col. 7, lines 16-32 of Sato).

Regarding claim 8, the combination of Wrobleski in view of Sato teaches wherein the step of modulating the at least one color includes changing a time relationship of the at least one color with respect to at least one other of the plurality of colors (see col. 5, lines 8-18 of Sato).

Regarding claim 14, Wrobleski teaches all the limitations of claim 12, above. However, Wrobleski does not teach wherein the controller is further operable to cause the interfering element to vary a plurality of parameters, the interfering element including: a separator responsive to image data and operable to separate the image data into a plurality of colors; and a color modulator responsive to the controller and operable to adjust at least one of the plurality of parameters for at least one of the

Art Unit: 2136

colors; the system further comprising a combiner coupled to the interfering element and operable to combine the image data for projection.

Sato teaches wherein the controller is further operable to cause the interfering element to vary a plurality of parameters (col. 6, lines 25-41), the interfering element including:

- A separator responsive to image data and operable to separate the image data into a plurality of colors (fig. 4, ref. num 1); and
- A color modulator responsive to the controller and operable to adjust at least one of the plurality of parameters for at least one of the colors (fig. 4, ref. num 4);
- The system further comprising a combiner coupled to the interfering element and operable to combine the image data for projection (fig. 4, ref. num 5).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine varying parameters, separating the colors, modulating the colors, and combining the colors, as taught by Sato, with the method of Wroblewski. It would have been obvious for such modifications because this prevents a video signal from being copied (see abstract of Sato).

Regarding claim 15, the combination of Wroblewski in view of Sato teaches wherein the at least one of the parameters includes one parameter selected from the

Art Unit: 2136

group comprising duty cycle, frequency, amplitude, brightness, intensity, presentation order and wavelength (see col. 6, lines 25-41 of Sato).

Claims 6, 9, 16, 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wrobleski (USPN '374) in view of Sato (USPN '158), and further in view of Kahn (U.S. Patent No. 5,394,274).

Regarding claims 6, 9, 16, 17, 19, and 20, the combination of Wrobleski in view of Sato teach all the limitations of claims 1-5, 7, 8, 10-15, and 18, above. However, the combination of Wrobleski in view of Sato does not teach the specifics as detailed in the following claims. These claims perform steps that alter the colors of the projected image in a way that is imperceptible to the human eye, but is perceptible to a video recording device, therefore distorting the illegally recorded video to prevent usurpers from making profit from selling the illegal videos. Kahn teaches preventing copying of data by imposing inaudible noises into the data that would be picked up by a recorder, but not the human ear. Similarly, Kahn refers to documentation (col. 5, lines 16-23) that studies the physiological differences of the human senses. This information lends to the suggestion of modifying the data in any method that would be recognized by a recording device, but not by the human senses. Rhoads (U.S. Patent No. 6,122,403) suggests modulating the data in imperceptible ways to provide a watermark (col. 31, lines 20-37, col. 58, lines 34-60, and col. 68, lines 52-67).

Regarding claim 6, the combination of Wrobleski/Sato in view of Kahn teaches wherein the imposing step includes the steps of: scanning a white light strip; separating the white light strip into color light strips; separating spatial entities into component colors; and modulating the component colors of the spatial entities over a color light strip.

Regarding claim 9, the combination of Wrobleski/Sato in view of Kahn teaches wherein the step of modulating the at least one color includes blanking the at least one color for an interval.

Regarding claim 16, the combination of Wrobleski/Sato in view of Kahn teaches wherein the interfering element further includes: a light source operable to provide a light strip; a color separator operable to separate the light strip into colors light strips; a scanner for scanning the color light strips over a frame, wherein the color modulator varies the parameters over the color light strips.

Regarding claim 17, the combination of Wrobleski/Sato in view of Kahn teaches wherein the modulator varies a projection rate of the color light strips over the frame.

Regarding claim 19, the combination of Wrobleski/Sato in view of Kahn teaches: a detector for determining spatial entities for color modulation, the interfering element including: a color separator for color separating the white light and the spatial entities for

Art Unit: 2136

color modulation into component colors; a time multiplexer for varying parameters of the component colors of the spatial entities for color modulation; a processor for defining an order of coarse bits and of fine bits for at least one of the component colors of the spatial entities for color modulation; a modulator for modulating the white light component colors and the component colors of the spatial entities for color modulation, the modulator providing modulated component colors; and a combiner for combining the modulated component colors.

Regarding claim 20, the combination of Wroblewski/Sato in view of Kahn teaches wherein the detector determines frame-linked spatial entities, the separator operable to separate the frame-linked spatial entities into component colors, and the modulator operable to modulate the component colors of the frame-linked spatial entities.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 2136

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon Hoffman whose telephone number is 571-272-3863. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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